

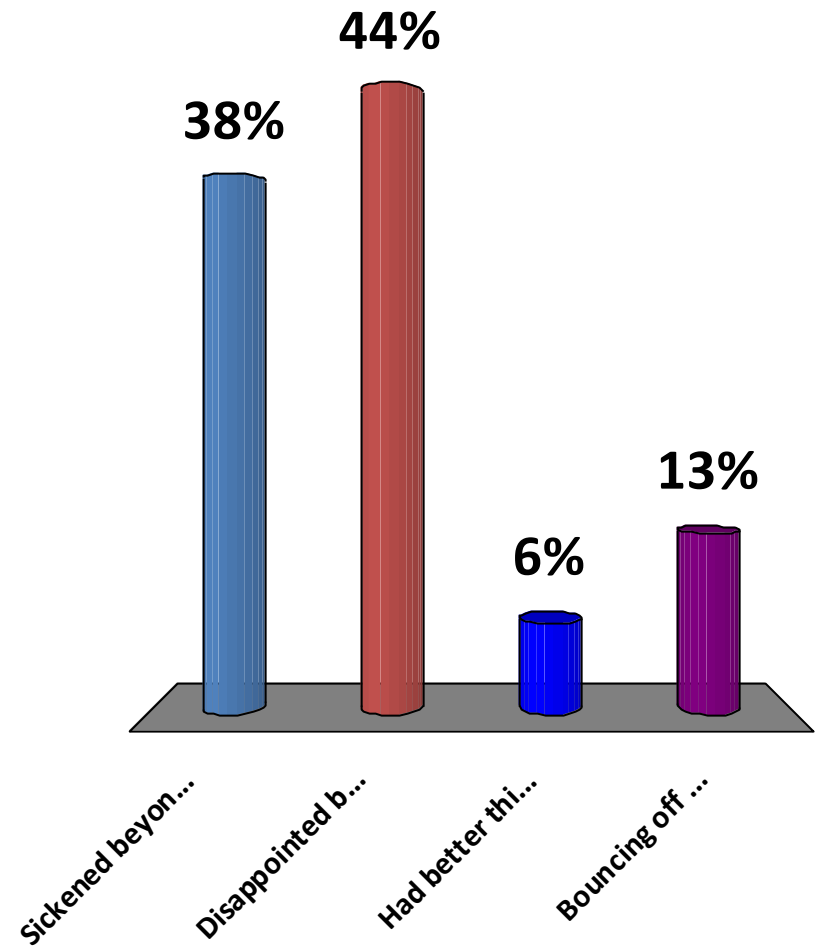
Welcome to the AGRICULTURE KITCHEN CABINET MEETING



Missouri
Department of
Natural Resources

At the conclusion of the MU-KU basketball game, were you:

1. Sickened beyond belief to the point it ruined the rest of your evening.
2. Disappointed but got over it easily.
3. Had better things to do, couldn't tell you who even won.
4. Bouncing off the walls with excitement (caution, you will not be invited back if this is your answer!).

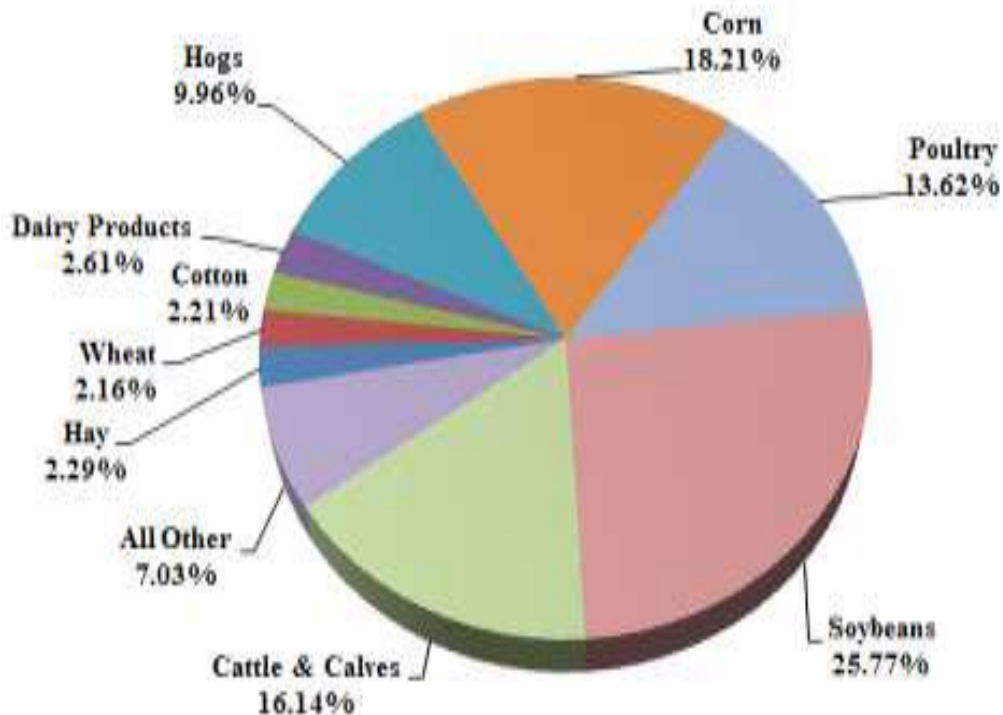


Missouri's Diverse Agriculture

2009 Cash Receipts

\$7.70 Billion

Livestock = 43% Crops = 57%



Source USDA-NASS

***Over 108,000 farms of
all types & sizes
Statewide***

Missouri's Rank in US:

- 2 – Cattle Operations
- 2 – Forage and hay
- 3 – Beef Cows
- 5 – Turkeys Raised
- 5 - Soybeans
- 7 – Hogs and Pigs
- 7 – Milk Cow Operations
- 8 – Hog Operations
- 9 – Corn
- 10 – Broiler Chickens

DNR's Active Role in Agriculture

We serve and support agriculture in variety of roles, like:

- ☐ Regulatory Permits, Engineering and Compliance
- ☐ Soil and Water Conservation & Cost-Share Incentives
- ☐ Environmental Technical Assistance
- ☐ State Water Resource Planning
- ☐ Water Use Reporting
- ☐ Interstate River Operation Support and Planning
- ☐ Nonpoint Source Financial Assistance
- ☐ Renewable and Energy Efficiency Programs
- ☐ Maintain U.S. Public Land Survey System
- ☐ Geologic Evaluation and Mapping

Regulatory Programs

Water Quality

- CAFOs
- Fertilizer & Pesticides
- Agri-Businesses
- Land Disturbance
- Stormwater
- 401 Certification

Air Quality & Odor

- Class IA CAFOs
- Agri-Businesses
- Ag Burning
- Grain Elevators



Does the department provide adequate technical and compliance assistance to complement agricultural regulatory programs?

1. Yes, optimum amount provided

2.

3.

4.

5.

6.

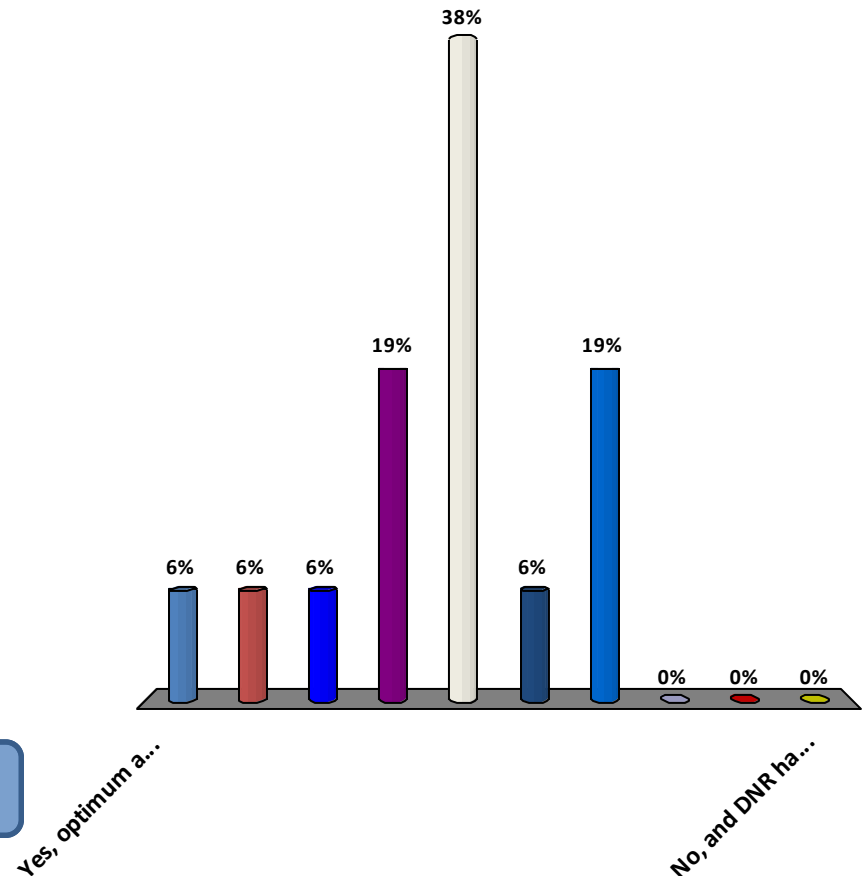
7.

8.

9.

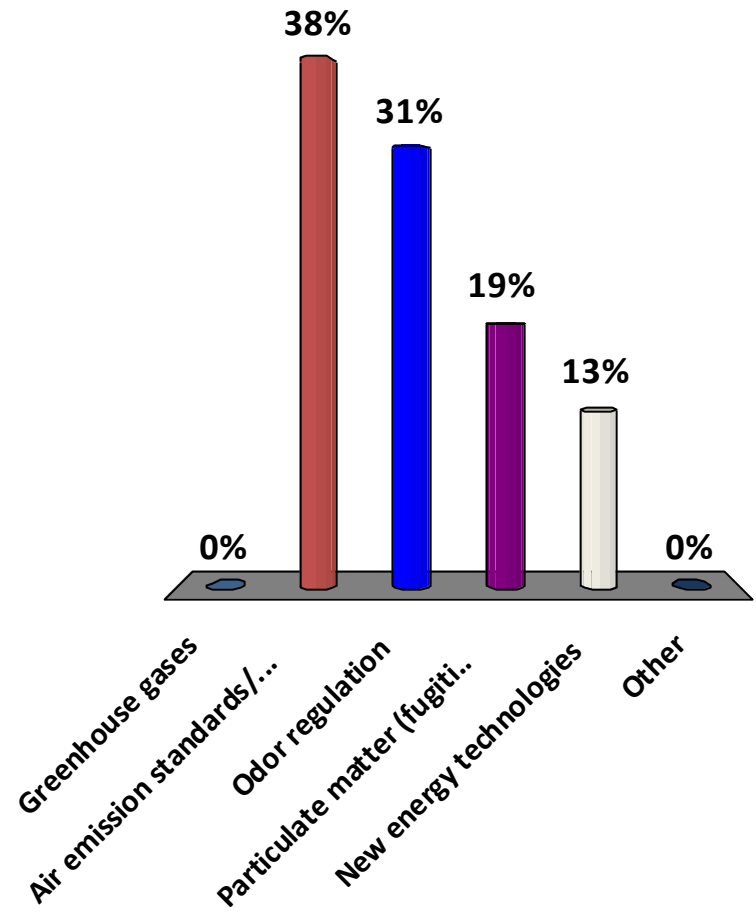
10. No, and DNR has a long way to go

Mean = 4.6875



What is your area of greatest concern on air pollution related impacts to agriculture?

1. Greenhouse gases
2. Air emission standards/permitting of CAFOs
3. Odor regulation
4. Particulate matter (fugitive dust, PM 10/2.5)
5. New energy technologies
6. Other



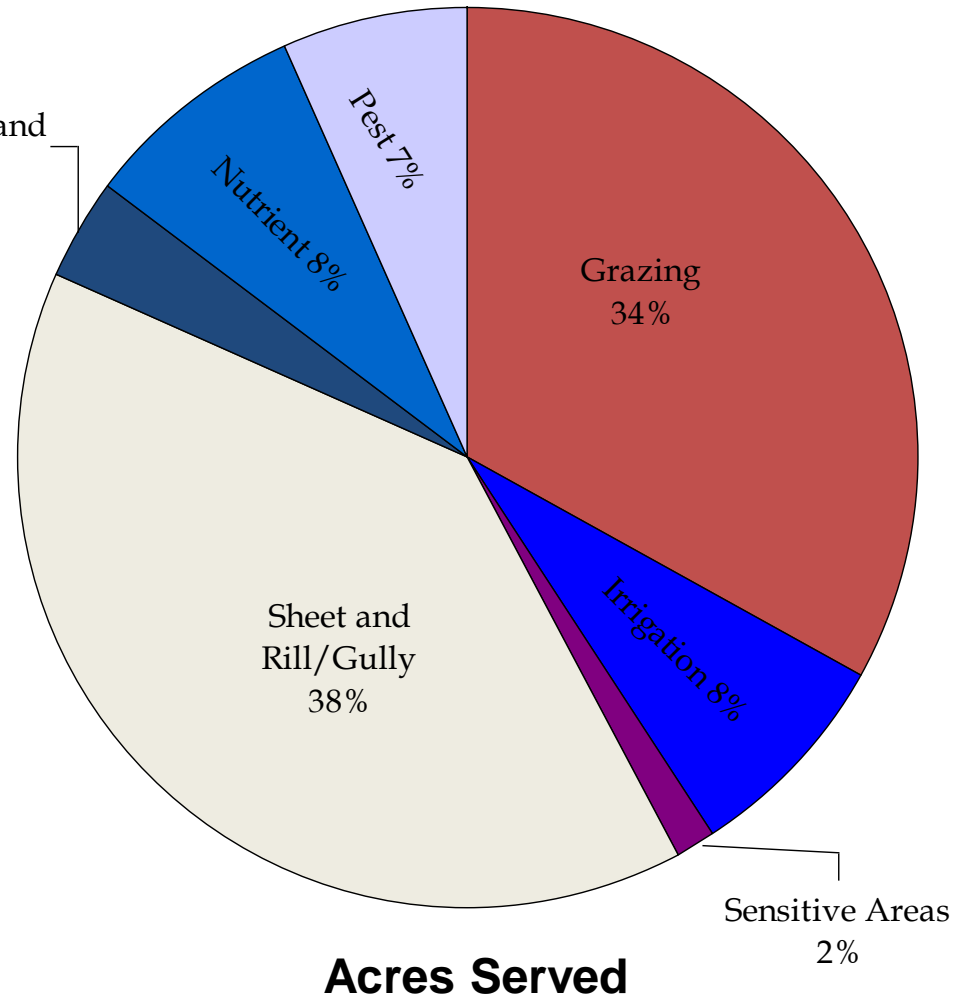
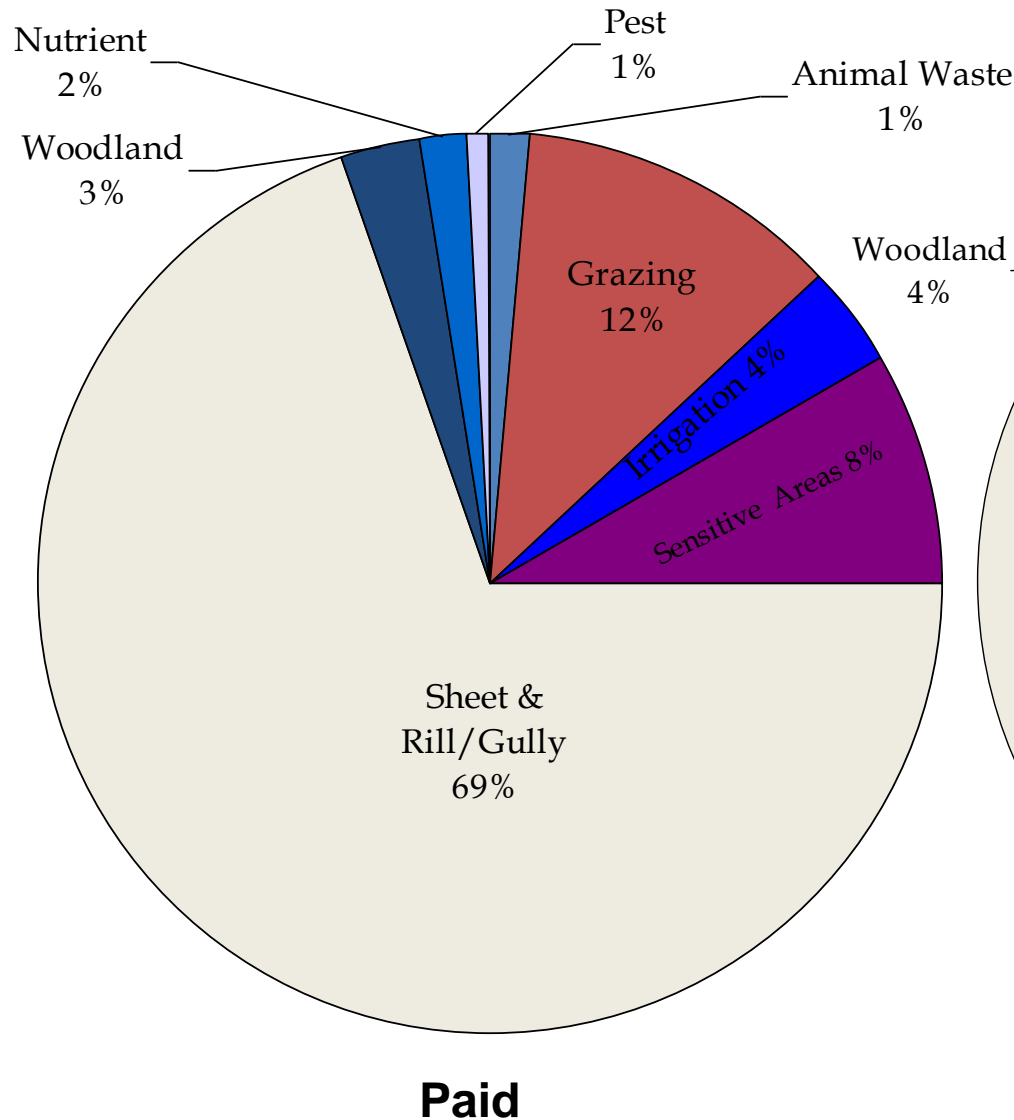
Soil and Water Conservation Program

FY11 Cost-Share

Resource Concern	Allocated	Paid	# Contracts
Animal Waste Management	\$620,175.69	\$319,066.20	12
Grazing Management	\$4,279,602.31	\$2,788,873.46	997
Irrigation Management	\$1,154,836.64	\$841,241.85	216
Sensitive Areas	\$2,947,080.98	\$1,999,366.52	505
Sheet and Rill/Gully	\$19,410,826.30	\$16,469,593.49	3215
Woodland Erosion	\$1,223,713.82	\$704,748.88	248
Nutrient Management	\$493,811.50	\$395,345.10	216
Pest Management	\$204,721.81	\$167,643.75	177
TOTAL	\$30,334,769.05	\$23,686,381.25	5586

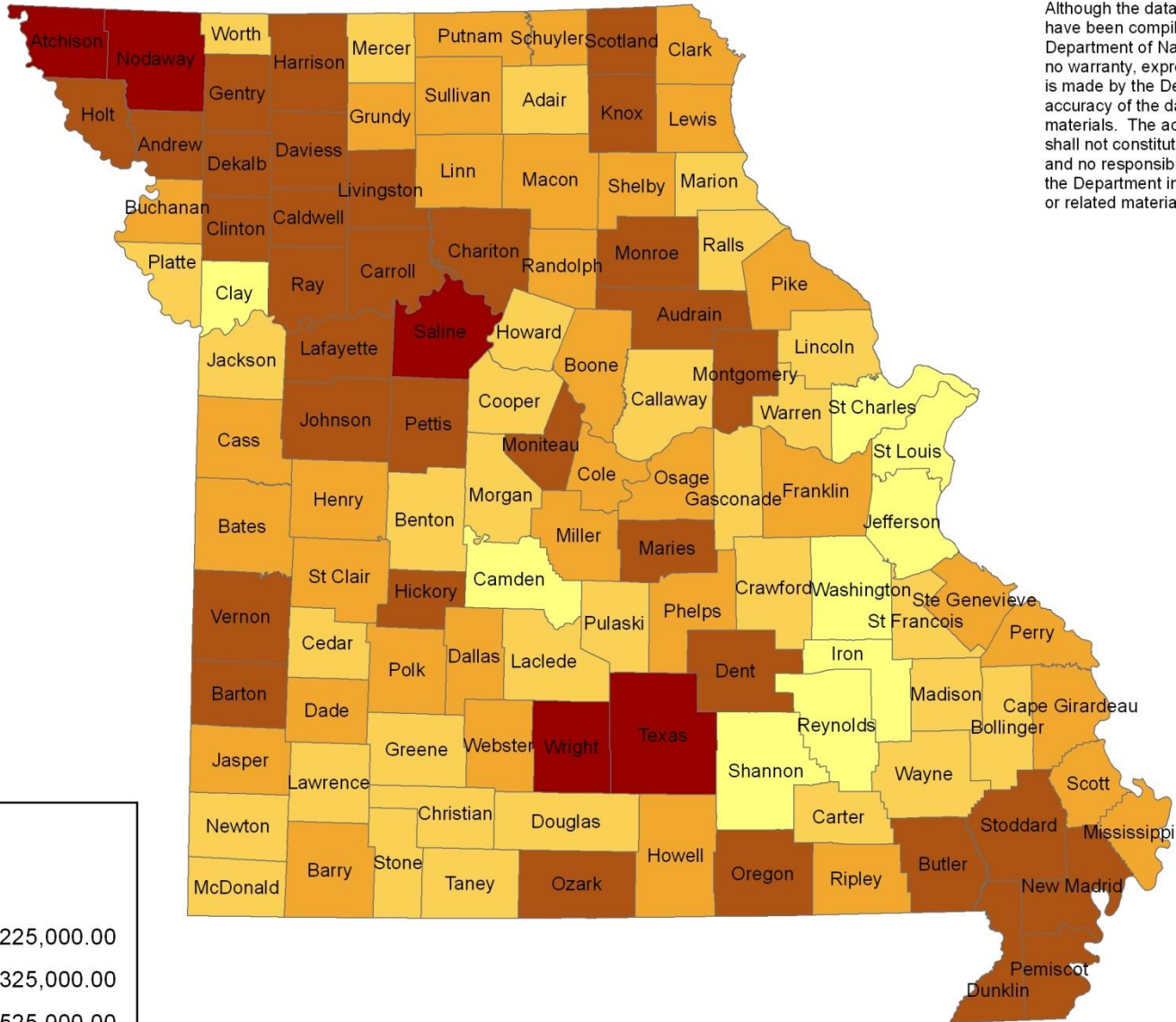
Soil and Water Conservation Program

FY11 Comparison of Paid vs. Acres Served








FY12 Total Cost-Share Allocation

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Legend

	<= \$125,000.00
	\$125,000.01 - \$225,000.00
	\$225,000.01 - \$325,000.00
	\$325,000.01 - \$525,000.00
	> \$525,000.00

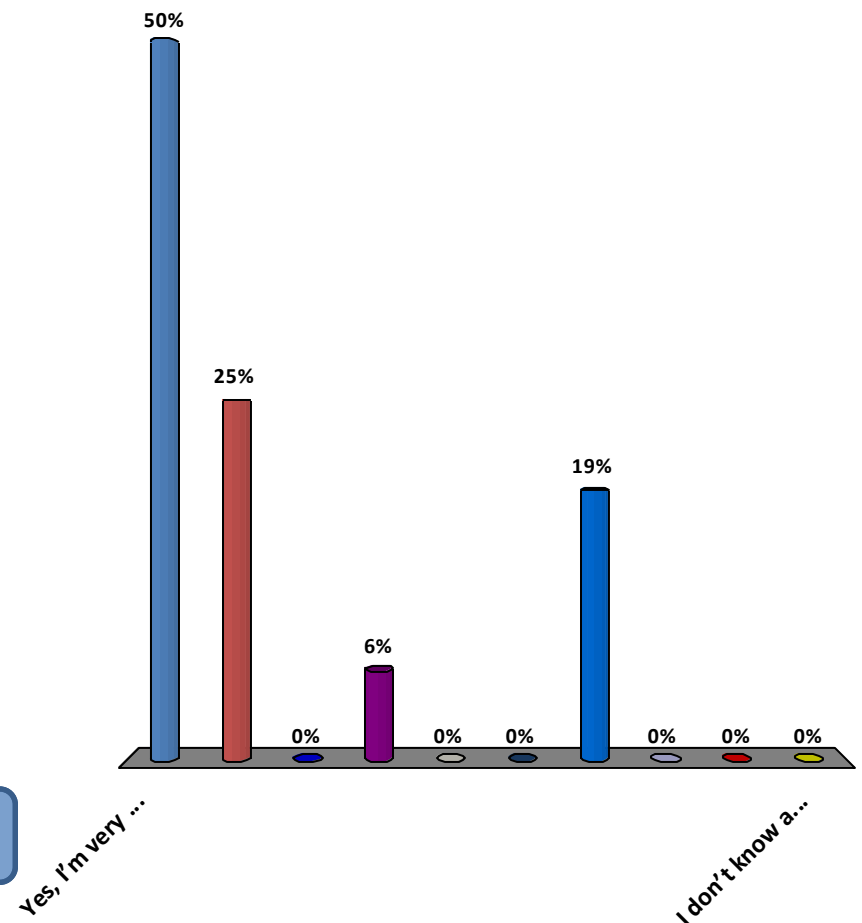
Missouri Department of Natural Resources
Soil and Water Conservation Program



The Soil and Water Conservation Program works in every county putting \$20+ million dollars on the ground statewide in conservation practices through the cost share program. On a scale from 1-10, how familiar are you with this program?

1. Yes, I'm very familiar
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
10. I don't know anything

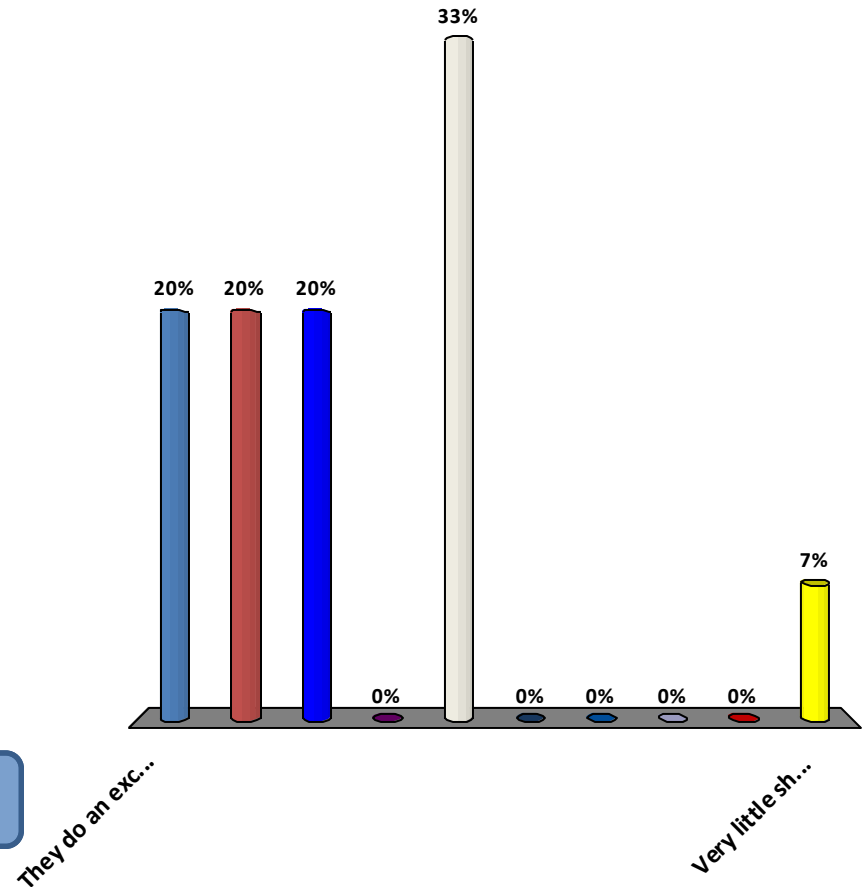
Mean = 2.5625



On a scale from 1-10, does the Soil and Water Program do an adequate job of showcasing and promoting their conservation opportunities, efforts and successes?

1. They do an excellent job
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
10. Very little showcasing is done

Mean = 3.5333



Division of Energy Programs

Energize Missouri Agriculture

Agriculture Cost Share Grants:

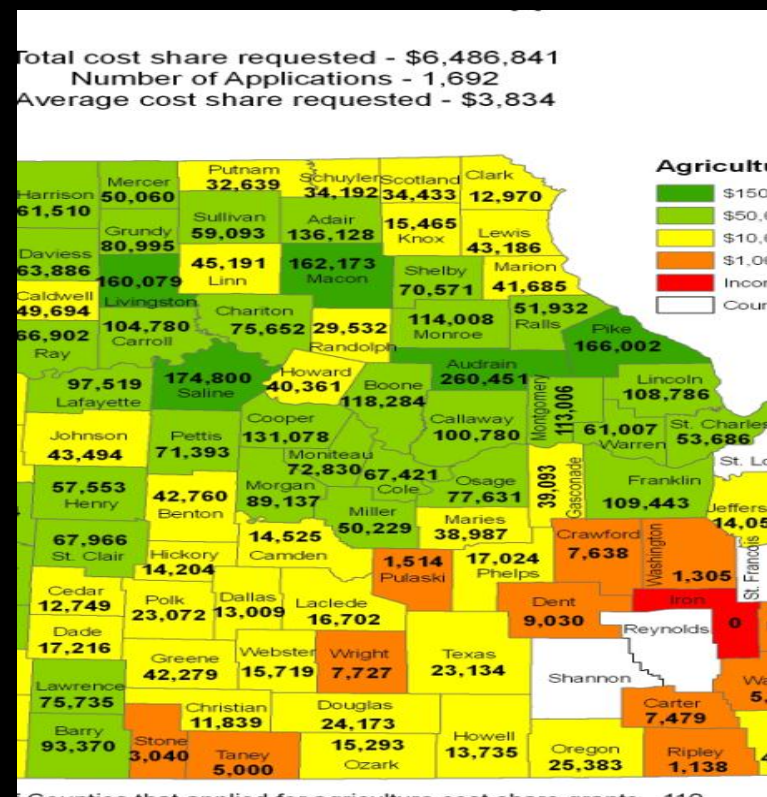
- 1535 Missouri farmers received \$5.7 in grants for 75% of the cost of energy-saving equipment and systems.

Energy Savings:

- 10,786,000 kwh of electricity
- 949,000 gallons fuel (130 billion BTUs)

Farm Energy Efficiency (Ag Field Days):

- The department awarded \$500,000 to five organizations that offered energy-efficiency workshops to more than 2,800 farmers.
 - More than 50 training sessions were held and topics were tailored to each region of the state.



Division of Energy Programs

Renewable Energy and Agriculture

First Farm Digester Project in Missouri – Hampton Feed Lot

- Hampton Feed Lot, Inc. in Chariton County received DNR grant to assist in the installation of a farm anaerobic digester-to-renewable electricity system.
- Completion expected May 2012.

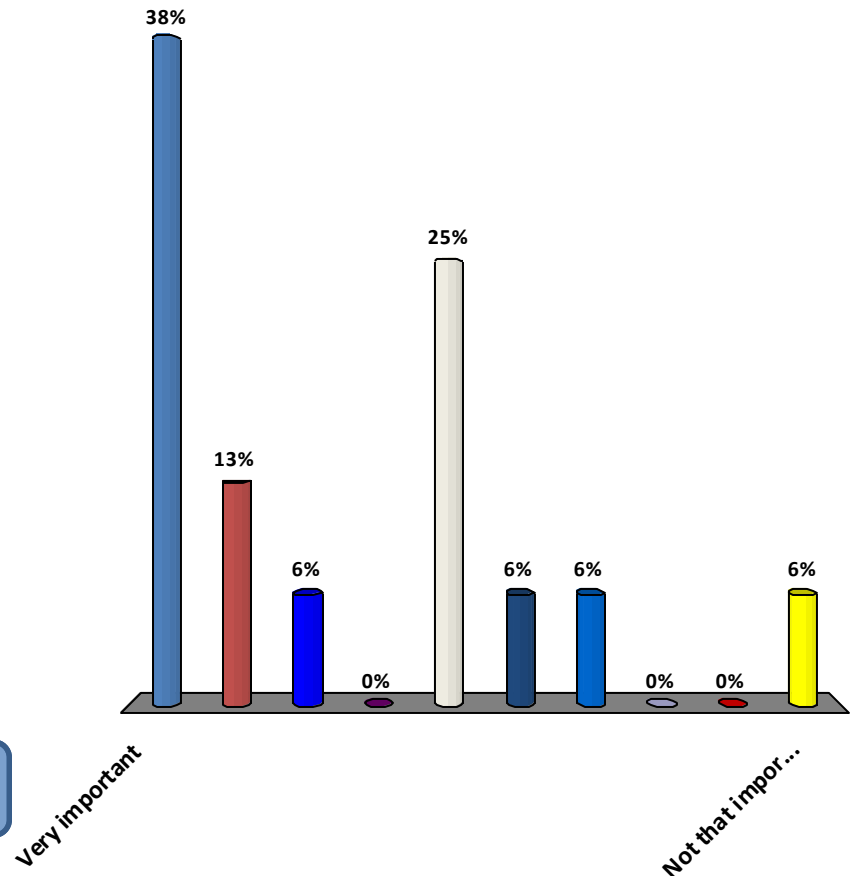


Hampton Feed Lot anaerobic digesters
(under construction)

How important are state energy related programs that support renewable energy and energy efficiency within agriculture?

1. Very important
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
10. Not that important

Mean = 3.5



Division of Geology and Land Survey

Practical application of geology and related earth sciences for the benefit of Missourians

- Geologic Mapping
- Energy Resources
- Wellhead Protection
- Economic Geology
- Environmental Geology
- Geologic Hazards
- Data Preservation
- Land Survey
- Emerging Technologies

Division of Geology and Land Survey

Environmental Geology

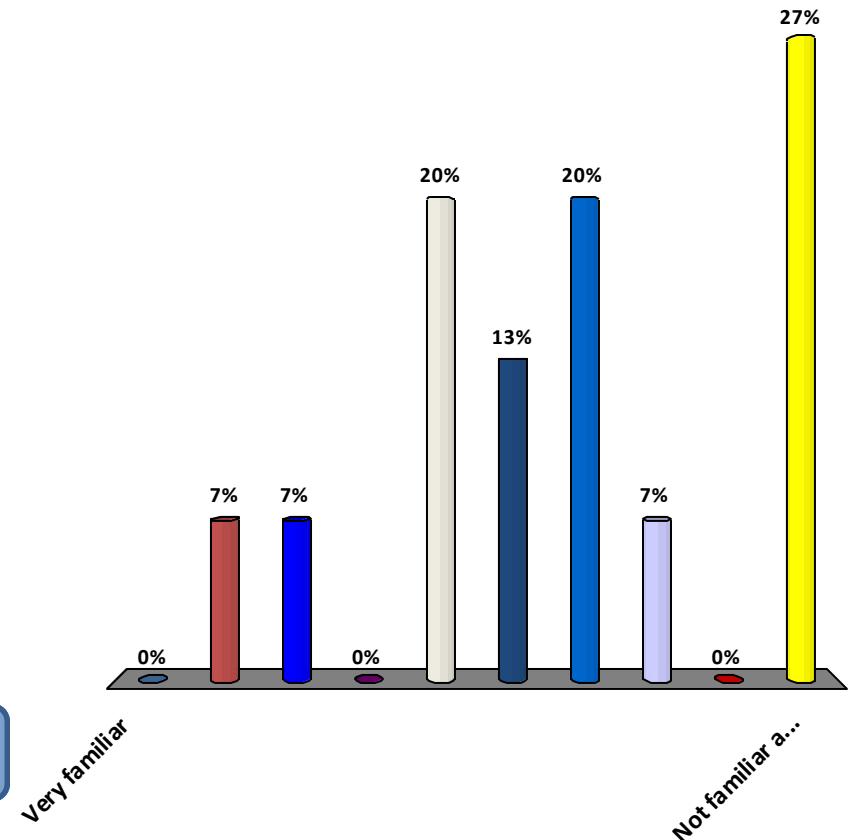
- Geologic suitability of liquid waste disposal sites
- Geologic suitability of solid waste disposal facilities
- Geologic/hydrologic assessment of karst terrane
- Watershed assessment



How familiar are you with the services that the Division of Geology and Land Survey provides?

1. Very familiar
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
10. Not familiar at all

Mean = 6.7333



Water Resources Center Initiatives

- Defend Missouri's water use interests
- Coordinate statewide water supply planning efforts
- Assess and monitor water resources availability
- Collect and analyze water use data
- Review permit applications and inspect regulated dams
- Provide guidance during drought and flood response
- Disseminate data to the public

State Water Resource Planning



Recreation



Power Generation



Fish & Wildlife

- Multiple Uses - Competing Interests -



Water Supply



Commerce / Transportation

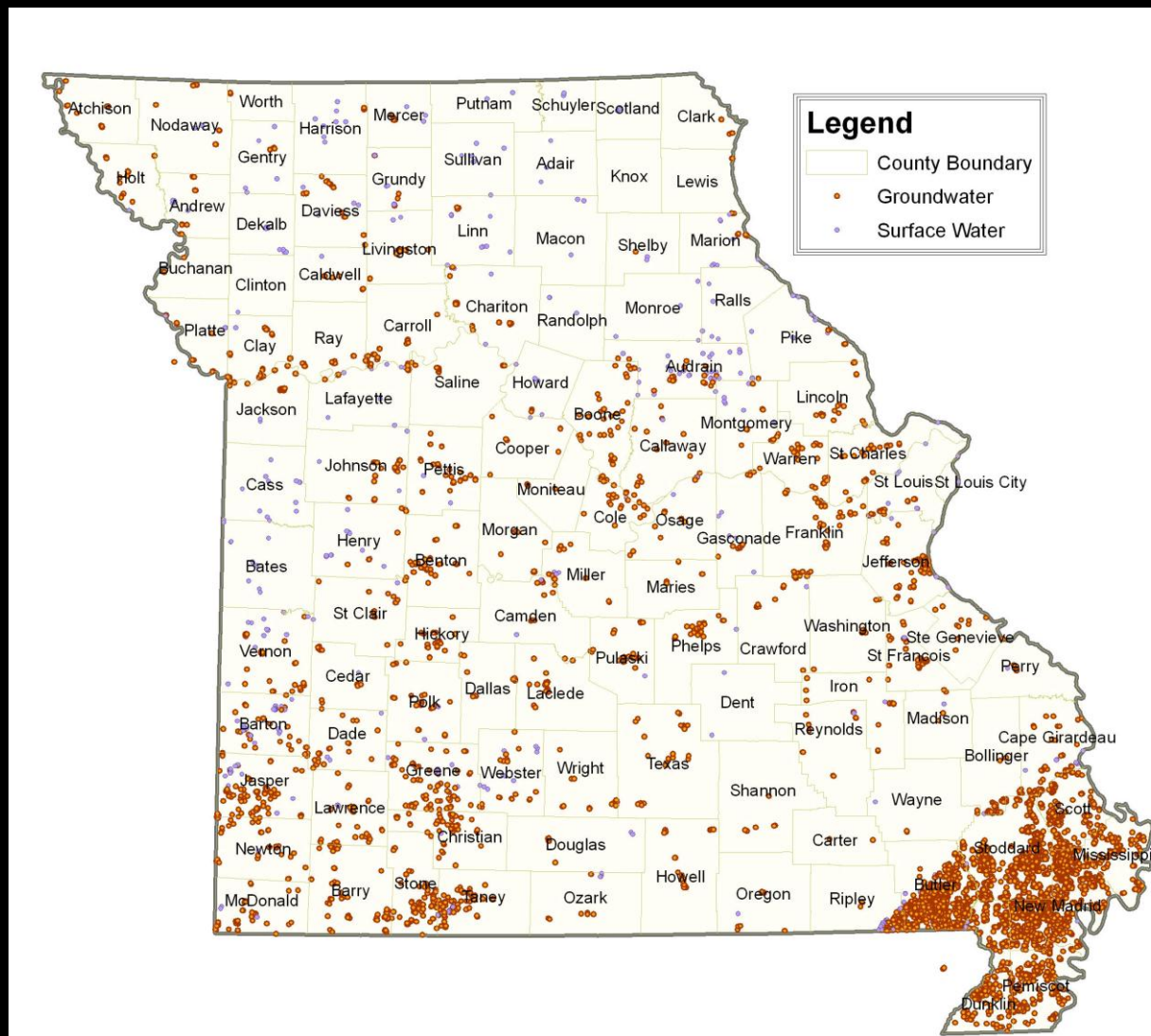


Agriculture

State Water Resource Planning

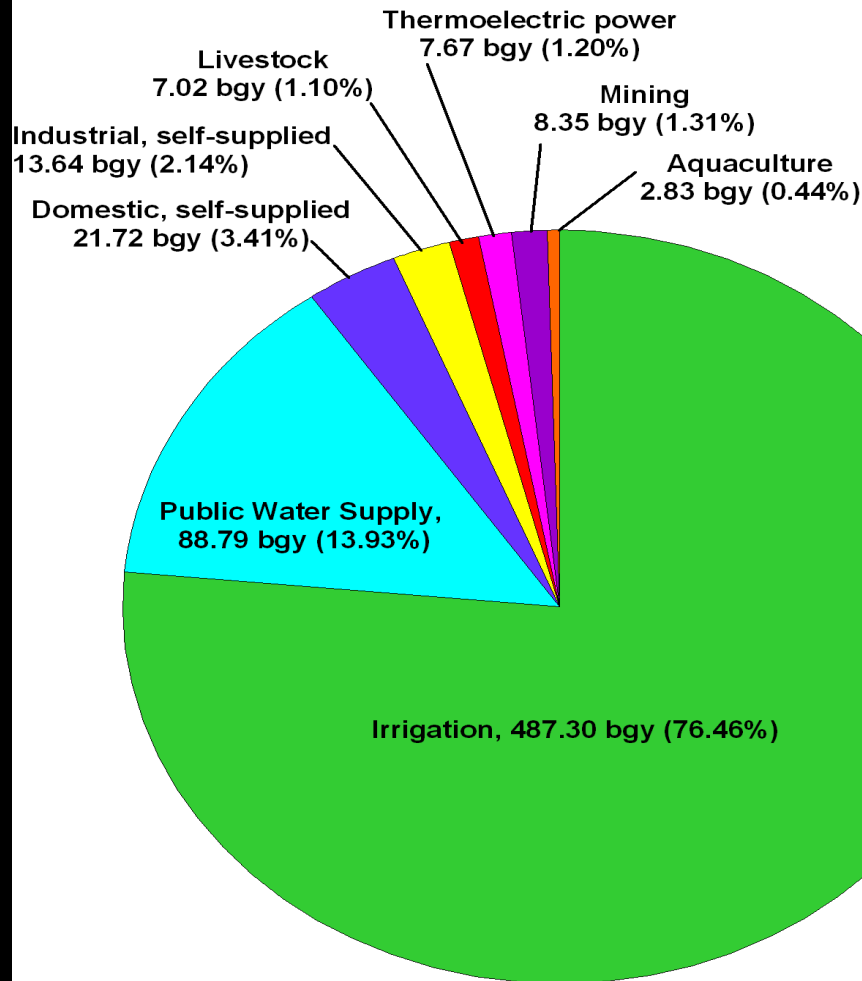
Major Water Use Law

- Users with the capability to withdraw ≥ 70 gallons per minute (100,000 gallons per day) must register and report use annually.
- 2800 registered Major Water Users
- Annual water use reporting averages 50% - 60%.
- Documents need and historic use.



State Water Resource Planning

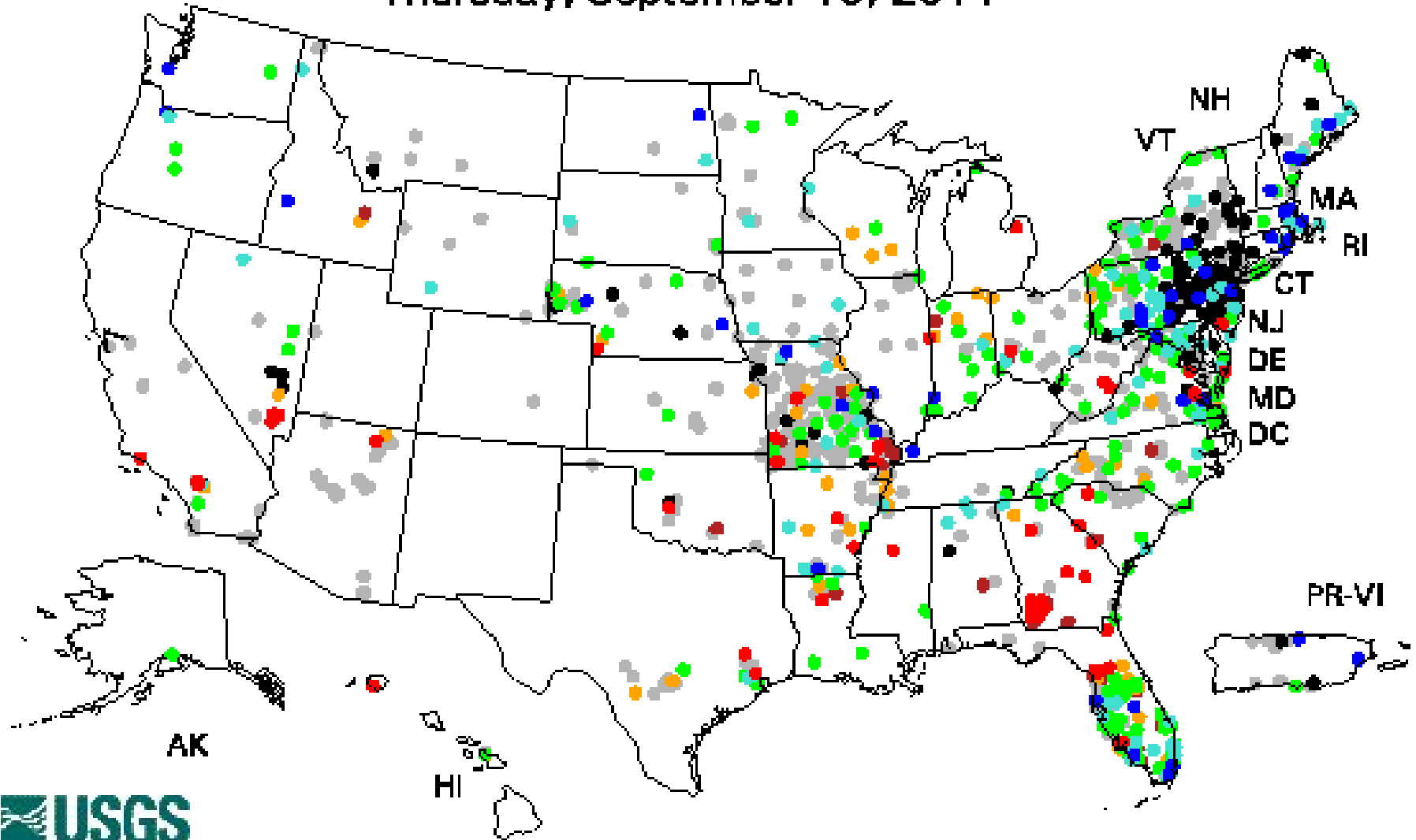
2005 Estimated Groundwater Use by Category
Billion gallons per year (percent of total use)
(Data source: U. S. Geological Survey)



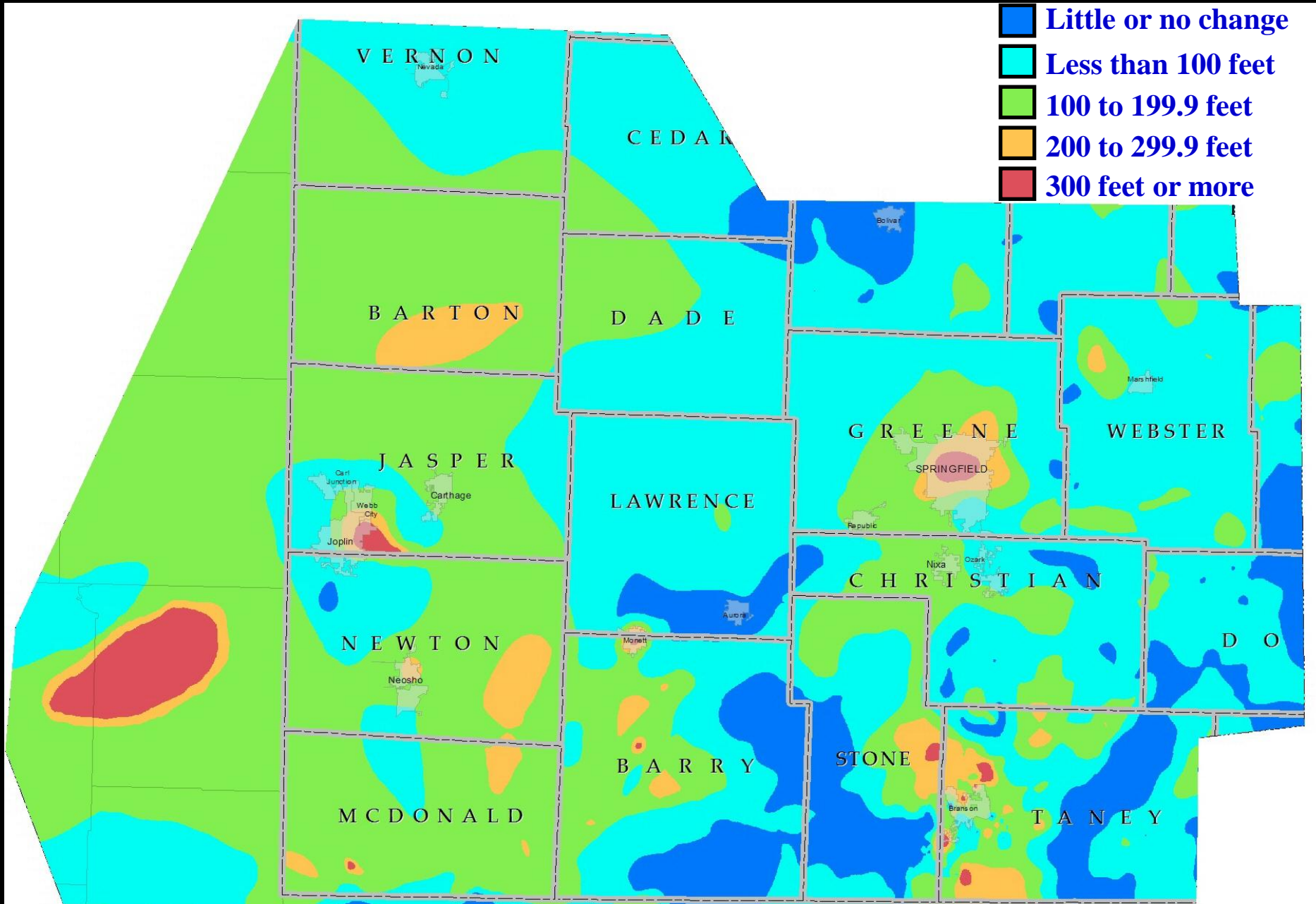
Total estimated groundwater use, 2005:
637.32 billion gallons

Real-time Groundwater Monitoring

Thursday, September 15, 2011

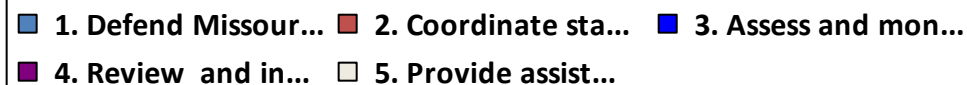
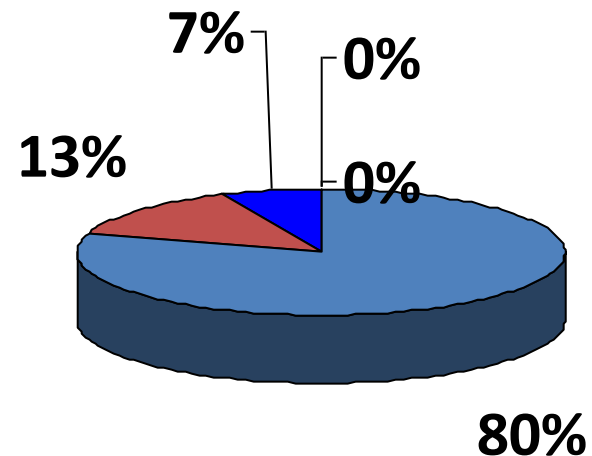


GROUNDWATER LEVEL DECLINE PREDEVELOPMENT TO 2006-2007



Which of the following Water Resources Center initiatives is the most important?

1. Defend Missouri's water use interests.
2. Coordinate statewide water supply planning efforts.
3. Assess and monitor water resources use and availability.
4. Review and inspect regulated dams.
5. Provide assistance during drought and flood response





Missouri Department of Natural Resources

THANK YOU

Any Questions?